



NUCLEAR ENERGY INSTITUTE

**Joe F. Colvin**  
PRESIDENT AND  
CHIEF EXECUTIVE OFFICER

January 19, 2000

The Honorable Richard A. Meserve  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dear Chairman Meserve:

There is general support in the industry for the overall approach on improving NRC technical requirements proposed by the NRC staff in SECY 99-264, *Proposed Staff Plan for Risk-Informing Technical Requirements in 10 CFR Part 50*.

We have been working on risk-informed improvements to fire protection, security, and technical specifications for a number of years. It is important to achieve a satisfactory conclusion to these three projects as soon as possible. Such an accomplishment, together with a successful industrywide implementation of the new NRC oversight process, will provide a clear signal that the effectiveness and efficiency of the NRC regulatory regime is being improved.

The industry believes that resources for risk-informed improvements to NRC technical requirements (SECY 99-264) should focus first on:

- 10 CFR 50.46, *Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors*, including Appendix K to Part 50, and
- Rulemaking on 10 CFR 50.44, *Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors*.

Section 50.46 and its accompanying appendix, Appendix K to Part 50, are central elements in the regulatory regime for nuclear power plants. They are directly linked to numerous NRC regulatory requirements and guidance documents. A better understanding of the safety and economic benefits from Section 50.46 (including Appendix K) improvements will provide an important basis for justifying and planning future risk-informed improvements to NRC technical requirements. The recent NEI survey on risk-informed improvements to NRC technical requirements (see Enclosure) indicates a potential resource benefit from Section 50.46 enhancements of up to \$3 million/unit/year while providing for an increased focus on safety-significant matters.

The Honorable Richard A. Meserve

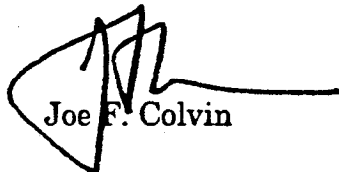
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We agree that there is sufficient analysis from the work performed in support of the NRC Safety Evaluation Report on the hydrogen recombiner exemption for Southern California Edison's San Onofre Nuclear Generating Station to enable an immediate rulemaking for improving 10 CFR 50.44.

The industry has been impressed by the dedication and work of the NRC staff in improving the efficiency and effectiveness of the NRC regulatory regime during 1999. If you have any questions on our suggestions, please contact me or Mr. Ralph Beedle (202-739-8088), or have the staff contact Mr. Steve Floyd (202-739-8078).

Sincerely,



Joe F. Colvin

Enclosure

- c: The Honorable Greta Joy Dicus, Commissioner, NRC
- The Honorable Nils J. Diaz, Commissioner, NRC
- The Honorable Edward McGaffigan Jr., Commissioner, NRC
- The Honorable Jeffrey S. Merrifield, Commissioner, NRC
- Dr. William D. Travers, Executive Director for Operations, NRC

**Risk-Informed Improvements to NRC (10 CFR Part 50)  
Technical Regulations  
NEI Survey Results**

**General Summary**

The list of regulations encompasses changes to associated regulatory guidance documents<sup>1</sup>. It is possible that there would be minimal or no change to the referenced regulation, but substantial change to the regulatory guidance documents.

Sixty-one units (59 percent of licensed units) responded to the October 1999 NEI survey.

The majority of the respondents emphasized that resources should be first focused on those regulatory improvement activities that have already started, especially:

- Fire protection, 10 CFR 50.48 and Appendix R
- Technical Specification activities
- Security, 10 CFR Part 73

**NRC Regulations Identified as Prime Candidates for Assessment and Change**

The regulations listed represent feedback from at least five or more units with an estimated potential benefit in excess of \$50,000/unit/year.

- LOCA, ECCS analyses – 10 CFR 50.46 and Appendix K to Part 50 – Estimated range of benefits<sup>2</sup> \$25k/unit/year to \$3 million/unit/year based on input from 37 units. The larger estimates included benefits from revenue enhancements, but do not include averted costs.
- Codes and Standards, 10 CFR 50.55a – Estimated benefit ranged between \$200k and \$500k/unit/year based on input from 26 units. Improvements are not dependent on changes to consensus codes and standards documents.

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<sup>1</sup> The term "regulatory guidance documents" includes: NRC regulatory guides, NUREGS, the NRC Standard Review Plan, NRC Branch Technical positions, and industry consensus standards, e.g., IEEE 279, ASME Section XI, etc., that are referenced in NRC guidance documents or regulations.

<sup>2</sup> The benefit estimates do not include costs associated with reductions in revenue (averted costs).

- GDC 4, Appendix A to Part 50, and the associated regulatory guidance documents that are linked to pipe-whip and dynamic effects – Estimated benefit of between \$100k and \$500k/unit/year based on input from 19 units.
- Environmental qualification of electric equipment important to safety for nuclear power plants, 10 CFR 50.49 – Estimated benefit between \$100k and \$300k/unit/year based on input from 28 units. Unclear from the responses as to what portion of the estimated benefit would be derived from SECY 99-256 (Option 2) activities.
- Standards for combustible gas control system in light-water-cooled power reactors, 10 CFR 50.44 – Estimated benefit of approximately \$200k/unit/year based on input from 24 units.
- GDC 19, Appendix A to Part 50, and associated regulatory guidance documents linked to Control Room Ventilation – Estimated benefit \$100k - \$250k/unit/year based on input from eight units.
- GDC 17, Appendix A to Part 50, and associated guidance documents, Electric Power Systems - Estimated benefit of approximately \$300k/unit/year based on input from five units.

#### Other NRC Regulations Identified as Possible Candidates for Improvement

This list represents regulations identified as potential candidates for improvement by less than five units or whose estimated potential benefit is less than \$50,000/unit/year.

- 10 CFR 50.62, Requirements for reduction of risk from anticipated transients without scram (ATWS) events for light-water-cooled nuclear power plants
- 10 CFR 50.34, Contents of applications; technical information – need for regulatory consistency
- 10 CFR 50.71, Maintenance of records, making of reports – linked to changes in Section 50.34
- 10 CFR 50.54, Conditions of licenses
- 10 CFR 50.59, Changes, tests and experiments – to be assessed following the implementation of recent Section 50.59 amendments and SECY 99-256 (Option 2) activities
- 10 CFR 50.72, Immediate notification requirements for operating nuclear power reactors – to be assessed following experience with implementing the recent Section 50.72 amendments
- 10 CFR 50.73 – to be assessed following experience with implementing the recent Section 50.73 amendments

- 10 CFR 50.61, Fracture toughness requirements for protection against pressurized thermal shock events
- 10 CFR 50.68 – Criticality accident requirements
- Appendix A to Part 50, General Design Criteria and associated regulatory guidance documents: Criteria 13, 35, 36, 37, 38, 39, 40, 54, and 56
- Appendix B to Part 50, and associated regulatory guidance documents
- Appendix E to Part 50, Emergency Planning and Preparedness for Production and Utilization Facilities
- Appendix G to Part 50, Fracture Toughness Requirements
- Appendix H to Part 50, Reactor Vessel Material Surveillance Program Requirements
- Appendix J to Part 50, Primary Reactor Containment Leakage Testing for Water-Cooled Power